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| 10/580,928 | 02/21/2007 | Peter J. Smith | 19339-105236 | 8739 |
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| CLARK HILL, P.C. | | | EXAMINER | |
| 500 WOODWARD AVENUE, SUITE 3500 | | | CAHN, DANIEL P | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|--------------------------------------|-------------------------------------|
| Office Action Summary | Application No. 10/580,928 | Applicant(s) SMITH ET AL. |
| | Examiner DANIEL CAHN | Art Unit 3634 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 06 November 2009.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-3,6-8 and 18-20 is/are pending in the application.
 4a) Of the above claim(s) 6 and 18 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1,2,7,8 and 19 is/are rejected.
 7) Claim(s) 3 and 20 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/06)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date: _____
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Drawings

The drawings were received on 11/06/2009. These drawings have been entered.

Specification

The specification amendment received 11/06/2009 has been filed and entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 7, 8 and 19-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1,

- The phrase in line 10-11, "said body portion of said runner disposed in said primary channel preventing rotation of said runner about said central axis and said trunnions disposed in said secondary channel coupling said runner and carrier for movement of said carrier with said runner in said vertical direction", is awkward and unclear. It sounds as though there is another element being a "channel coupling". Further, -the body portion of said runner is disposed in said primary channel which prevents rotation-, seems to make more sense if that is what the applicant means. Further this is seen with the phrase, -said trunnions are disposed in said secondary channel in which the trunnions

are coupling said runner and said carrier together This lack of verb usage (such as "is" and "are") as well as words such as "which" create an unclear description/claim and the applicant is noticed that these are non-limiting examples and that this issue must be addressed throughout all of the claims.

- In the third to last line, the phrase "whereby rotational and translational movement" is unclear due to a lack of antecedent basis.
- In line 6, the phrase, "said guide rod and moving in said vertical direction" is unclear since it sound as though the guide rod is always moving. Wouldn't it be –moveable- or –capable of moving- between the two positions?

Examiner notes that claims 2-3, 7, 8 and 19-20 are rejected as being dependent from a rejected claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 7, 8 and 19 are rejected under 35 U.S.C. 103(a) as obvious over Podolon et al. (US 4241542) and Swift et al. (US 2945691).
Regarding claim 1, Podolon teaches an **automotive window regulator system comprising:**

a guide rod (32; Fig. 1 and 2) defining a central axis extending in a vertical direction;

a runner (or yoke 38 and ,43,44; See Fig.'s 3 and 6) including a body portion (38 and 43) and a pair of trunnions (42; Fig. 1, see definition of trunnion below¹), said runner drivingly engaged with said guide rod and moving in said vertical direction along said guide rod between a first position and a second position (as seen between Fig.'s 3 and 4); and

a window carrier (or yoke 40; see Fig. 3 and 6) including a primary channel (the cavity in which 38 sits; refer to Fig. 6) **extending in said vertical direction and a secondary channel** (the inherent holes in which the trunnions 42 sit) **extending in a lateral direction substantially orthogonal to said vertical direction** (as seen in Fig. 5), said body portion of said runner disposed in said primary channel preventing rotation of said runner about said central axis (the body portion at 38, as seen in Fig. 6, is attached to the yoke 40 and if a user tried to rotate it, not only would it be prevented by the block 43 and the drive block 45 (Fig. 5), it would also be prevented because of its size in that if turned it would be stopped by the impediment of track 24, again see Fig. 5) and said trunnions disposed in said secondary channel coupling said runner and carrier for movement of said carrier with said runner in said

¹ **trun·nion**  (trŭn'ēn) *n.*

A pin or gudgeon, especially either of two small cylindrical projections on a cannon forming an axis on which it pivots.

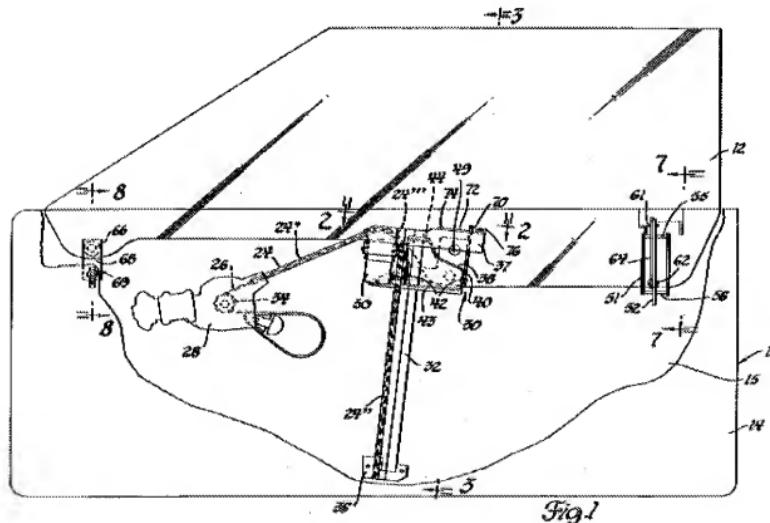
vertical direction, said trunnions defining a lateral axis substantially orthogonal to said central axis (see Fig. 5);

wherein said carrier rotates about said lateral axis and translates in a horizontal direction (as seen between Figures 3 and 4; examiner notes that as the carrier 40 rotates, it also inherently translates or moves/relocates in a direction orthogonal to the both the linear and vertical axes previous mentioned) substantially orthogonal to said vertical and lateral directions in response to moving said runner between said first and second positions, whereby rotational and translational movement of said carrier permits nonparallel movement of said carrier with respect to said central axis as said runner moves between said first and second positions (this can be seen in Figures 3 and 4).

All of the elements of the instant invention are discussed in detail above except providing that **said guide rod is adapted for rotating about said central axis and that said runner is drivingly engaged with said guide rod and moving in said vertical direction along said guide rod between a first position and a second position in response to rotation of said guide rod.** Attention is therefore drawn to Swift which teaches a similar window regulator assembly where the guide rod (166; Fig. 2) is rotatable about a central axis and has a runner (34; Fig. 2) drivingly engaged (excerpt 2 below discusses) with the guide rod and moving in a vertical direction along said guide rod between a first and second position in response to rotation of the guide rod. It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the guide rod of Podolon with the rotatable screw rod of Swift

in order to provide a compact regulating device with few elements which further provides a mere substitution of one known element for another where such a combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Further, all of the claimed elements were known in the prior art as evidenced above and the elements perform as expected and thus the results would be expected.

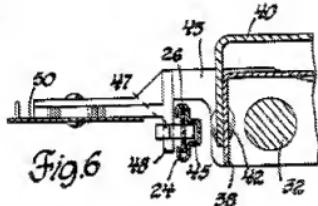
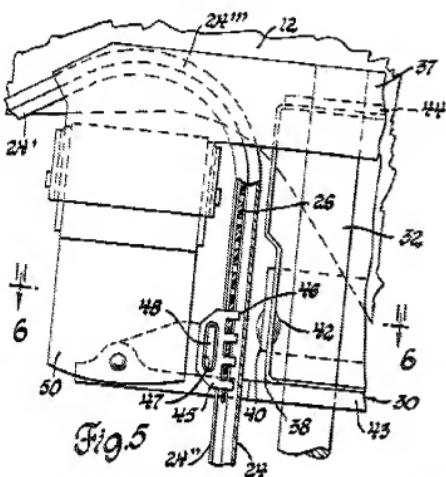
Images from Podolan



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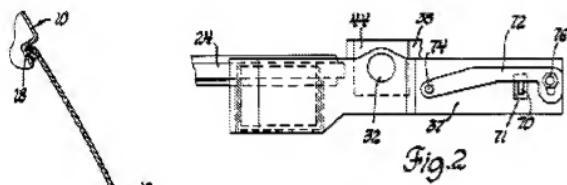
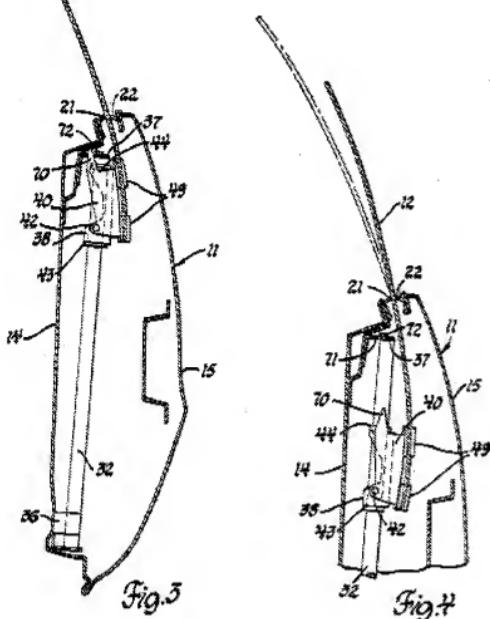
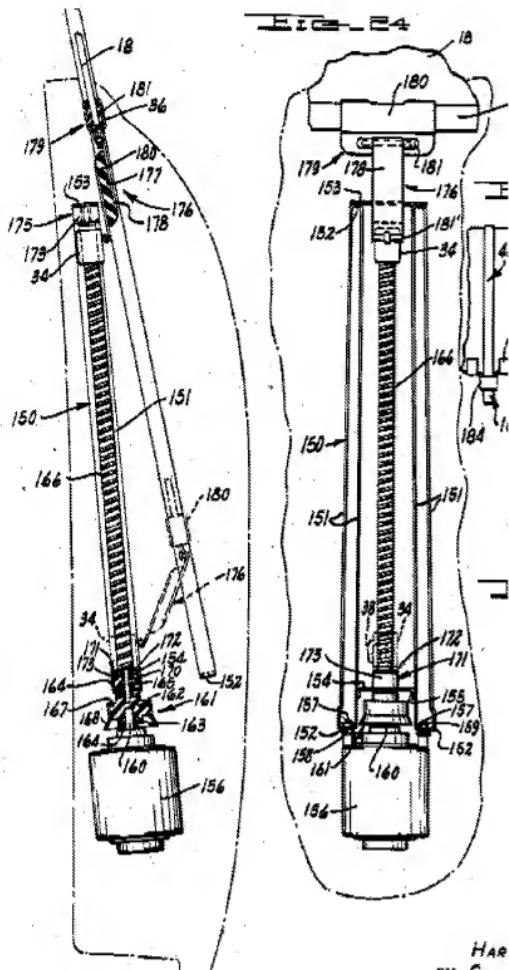


Fig.2





Regarding claim 7, the modified system of Podolon further teaches **said guide rod as a straight threaded screw** (see Swift Figures 23/24) and **said runner as including a threaded bore threadingly received** (as discussed in excerpt 2 below) onto **said screw**.

Excerpt 2 from column 9 of Swift

The captive ball nut 34 is threadedly received on screw 166 for vertical travel as the screw is rotated, and the upper end of the screw 166 is rotatably journaled in a cushioned mounting unit 175 similar to the unit 171 and similarly bonded to the bottom of the upper yoke 153. It will be seen that the upper and lower mounting units 171, 175 serve as bumpers or stops to cushion the nut 34 at the ends of its up and down movements.

The window 18 is connected to the nut 34 by means

Regarding claim 8, the system further includes a motor (156; Fig. 23) which rotationally drives said screw about said central axis to move said runner between said first and second positions (see Figure 23).

Regarding claim 19, **Said trunnions include an elliptical surface** (as seen in fig. 6), **said elliptical surface (inherently) bearing on opposing surfaces of said secondary channel** (as seen in Fig. 6 as well).

Claim 2 is rejected under 35 U.S.C. 103(a) as obvious over Podolon and Swift as applied to claim 1 above, and further obvious over Kondo (US 4106353).

Regarding claim 2, all of the elements of the instant invention are discussed in detail above except providing an arcuate window mounted to the carrier where said window has a radius of curvature and said system further includes a first and second glass run channel each of which have substantially the same radius of curvature of the window. Further which first and second edges of the window are received by the glass

run channels and which they define the path of travel of the window as the runner moves between a first and second position. Attention is therefor drawn toward Kondo which teaches a similar window regulator system having the previously discussed limitations as seen in Fig. 5 and further discussed in the final few lines of the second paragraph of the Kondo excerpt inserted below. It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the modified system of Podolon with the curved window and curved glass run channels as taught in Kondo in order to provide the curved structure demanded by the shape of the vehicle as while reducing friction cause to the glass run channels. This is just one of a few reasons one skilled in the art would do provide these elements.

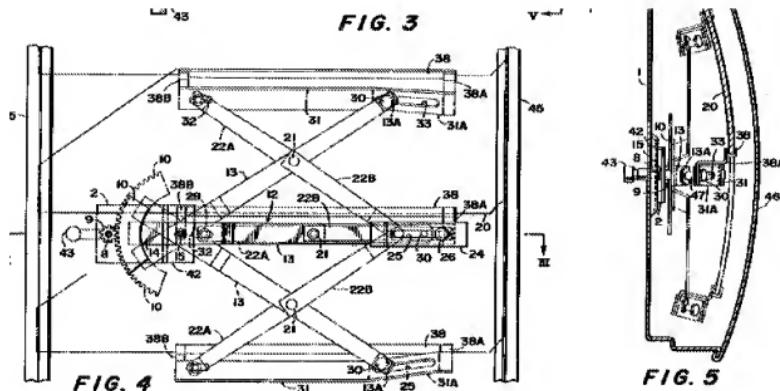
Kondo Excerpt

100,303

8

0 Therefore, the guide pin 30 fixed to the bracket-side end
d of the lift arm 13 acts to urge the lift arm bracket 31
l upward from the position shown by the solid lines in
0 FIG. 4 while making sliding movement toward the
d 5 inner end, or the left seen in FIG. 4, of the guide slot 33.
e With this swinging movement of the lift arm 13, the
t equalizer arms 22A and 22B are urged to swing clock-
e wise around the connecting shaft 21 which connects
t these equalizer arms 22A and 22B to each other through
t 10 the lift arm 13. Due to the fact that these arms 13 and
g 22A, 22B are arranged to make so-called pantograph-
o like movement, the lift arm bracket 31 is shifted in paral-
n lel relation from the position shown by the solid lines
l toward the position shown by the one-dot chain lines
15 while being maintained in horizontal position.

s According to the present invention, the angle α de-
d fined between the centerline or axis P of the pivot 15
t and the extension line Q of the longitudinal centerline of
o the guide slot 33 formed in the bent portion 31A of the
e 20 lift arm bracket 31 to be engaged by the guide pin 30
o fixed to the associated end of the lift arm 13 is not 90°
n but less than 90°, and thus, the lift arm 13 is caused to
n swing around the pivot 15 in the state in which the
l bracket-side end of the lift arm 13 is inclined relative to
e 25 the inner panel 1. On this occasion, in response to the
e sliding movement of the guide pin 30 in the direction
n intersecting at right angles with thickness of the win-
a dows glass 20 within the guide slot 33 formed in the
0 portion of the lift arm bracket 31 inclined relative to the
30 inner panel 1, the bracket-side end of the lift arm 13
l makes arcuate movement including movement in the
n direction of thickness of the glass 20. Therefore, the
l window glass 20 guided by the glass-runs 45 is caused to
s 35 make the arcuate movement not only in the direction
l perpendicularly intersecting the thickness of the win-
t dows glass 20 but also in the direction of the thickness of
t the window glass 20 so as to be reliably moved along a
h predetermined curved path defined by the glass-runs 45.
l To describe more specifically, ~~describing now that the arm~~



Allowable Subject Matter

Claims 3 and 20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-3, 7-8 and 19-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL CAHN whose telephone number is (571)270-5616. The examiner can normally be reached on Monday through Friday (9 a. m. to 5 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Katherine Mitchell can be reached on 571-272-7069. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DANIEL CAHN/
Examiner, Art Unit 3634
/KATHERINE MITCHELL/
Supervisory Patent Examiner, Art Unit 3634